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LABORATORY QUALITY AND ACCREDIATION OFFICE (LQAO) COMMENTS ON DRAFT WORK PLAN REMEDIAL/ REOMVAL ACTION FOR SITE 42 AND SITE 17 NSWC INDIAN HEAD MD
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LABORATORY QUALITY AND ACCREDIATION OFFICE

Laboratory Quality And Accreditation Office (LQAO) Comments on
Draft Work Plan Remedial/Removal Action
for Site 42 – Olsen Road Landfill and Site 17
Naval District Washington - Indian Head
June 28, 2005

The Naval Sea Systems Command (NAVSEA) Laboratory Quality and Accreditation Office (LQAO) performed a project-specific review of planned sampling, analysis, and quality assurance/quality control activities for remedial/removal actions at Installation Restoration (IR) Sites 17 and 42 at Naval District Washington Indian Head (NDW-IH), Indian Head Maryland. The following project-planning documents were reviewed to determine conformance with Navy (IR) Quality Assurance (QA) Program requirements:

- Section 1.6.1, Quality Control Plan Requirements from the Scope of Work for Task Order 011, LANTDIV Contract N62470-03-D-4402
- Work Plan Sections 1.0, Introduction and 4.0, Field Sampling and Analysis
- Program Quality Control Manual for Multi-Contaminant Remedial action, Contract No. N62470-02-D-3260
- Program Quality Control Plan Addendum, Remedial/Removal Action for Site 42 – Olsen Road Landfill and Site 17, Naval District Washington Indian Head, Indian Head, Maryland, April 21, 2005

The *Naval Installation Restoration Chemical Data Quality Manual (IRCDQM),* September 1999, and the *DoD Quality Systems Manual for Environmental Laboratories (DoD QSM),* Version 2, June 2002 provide the standards for performing the review. The documents were reviewed using guidelines contained in *Guidance for Quality Assurance Project Plans,* EPA QA/G-5, December 2002. These guidelines are consistent with the *Uniform Federal Policy for Quality Assurance Project Plans* (UFP-QAPP), which was signed by EPA and DoD in March 2005. While the UFP-QAPP has not yet been formally implemented throughout DoD, its use will help ensure that collected data are of the appropriate quality to support the decisions to be made. Its use will also facilitate regulatory review and approval of project-planning documents.

The project-planning documents do not address all recommended quality assurance (QA) and quality control (QC) elements of the IRCDQM or EPA QA/G-5. Table 1 contains the results of this review.

Table 1: Review Comments

Comment Number	Section/Page	Statement or Issue	Comment
1	Program Quality Control (QC) Plan Addendum, Section 1.0, Figure 1-1, and Exhibit IV-1A	Distribution List and Approval Signatures are incomplete.	At the time this project review was performed, only the laboratory and key contractor personnel had been identified. Subcontractors had not been identified. Final project-planning documents should include a list of key personnel (including contractor, subcontractor and laboratory personnel) who are to receive copies of the Work Plan and any relevant attachments (e.g. Program QC Manual and Program QC Plan Addendum). Project-planning documents should include spaces for signatures to indicate contractor, subcontractor, and laboratory acceptance of relevant specifications. [See EPA QA/G-5 Sections 2.1.1 and 2.1.3]
2	Work Plan, Section 1.0, page 1-1	Problem Definition/Background is incomplete.	Project-planning documents do not provide information on: — The expected concentration and distribution of constituents of concern, — Background concentrations of metal constituents of concerns (lead, mercury, and zinc), or — Site-specific action limits or decision criteria. This information forms the basis for the development of Data Quality Objectives and appropriate sampling and analysis requirements. [See G-5 Section 2.1.7 and EPA QA/G5S, *Guidance on Choosing a Sampling Design for Environmental Data Collection*]
3	Work Plan, Section 1.0, page 1-1	Project/Task Description is incomplete.	The following information was not available for review: — Work schedules, — Start and completion dates, — Resource and time constraints, and — Maps or diagrams The project team should ensure this information is included in the final project-planning documents. [See G-5 Section 2.1.6.
4	Work Plan, Section 4.0 (general)	Data Quality Objectives (DQOs) are not defined.	The project-planning documents do not define DQOs for this project, as required by the IRCDQM Section 2.1. DQOs are a key element in promoting data quality as they serve as the "road map" for the project. The absence of DQOs will likely have a significant adverse impact to the project. The project team should ensure that DQOs are developed. [See EPA QA/G-4 for guidance on developing DQOs.]
5	Work Plan, Section 4.0 (general)	Measurement Performance Criteria (MPCs) have not been developed.	The project-planning documents do not describe the development of MPCs. Quantitative MPCs (i.e. required performance criteria for precision, accuracy, and sensitivity) should be developed for each type of measurement, to ensure all collected data meet the project-specific DQOs.

Comment Number	Section/Page	Statement or Issue	Comment
6	N/A	Documentation of Special Training and Certifications is not described.	Project-planning documents do not discuss: — Whether there are any specialized training or certification requirements, — Who is responsible for verifying training requirements, or — Where this information is documented. OPNAV Instruction 5090.1B, Chapter 25 requires that organizations performing sampling and testing activities for Navy have a documented training plan and that all personnel be appropriately trained. Contractors and subcontractors should provide evidence of this training.
7	Work Plan Section 4.1, pages 4-1 to 4-5	Sampling Design and Sampling Methods (all media) is incomplete.	Inadequate information is provided to ensure that collected samples will represent actual site conditions. Because contaminants generally are not homogeneously distributed throughout solid media (e.g. wastes, soils, and sediments), the collection of discrete or 'grab' samples of these media will not provide representative information. The collection of composite samples should be considered for all solid media. Clear sampling instructions and diagrams should be provided for all media so that field personnel will know the following: — How to determine when excavation activities are complete, — How to select specific sample locations that are 'representative', — What criteria should be used to determine which excavator bucket or shovel represents an 'average', — How many subsamples to collect for each composite, and — How to homogenize solid samples before they are placed in containers. Detailed standard operating procedures (SOPs) should be provided for each sampling method, and these SOPs should be available in the field.
8	Work Plan Section 4.1.2, page 4-4	The Work Plan does not list specific contaminants of concern for Site 42.	Table 1 does not include the list of specific analytes included for each type of analysis (e.g. volatiles, semivolatiles, metals.) The basis for the planned analysis of the stream sediment confirmation sample (Site 42) should be explained. Laboratory analysis should focus on site-specific constituents of concern. The project team should verify that the target analyte lists match the constituents of concern. [Note: This should be done during the development of DQOs and MPCs – see comments 4 and 5]

Comment Number	Section/Page	Statement or Issue	Comment
9	Work Plan, Section 4.4, page 4-4	The Work Plan does not include criteria for evaluating the field Quality Control (QC) results.	This section should explain why the field QC samples are being collected and how will the results be used.
10	Work Plan Section 4.11, page 4-13	The discussion of Laboratory QC is incomplete.	The following information should be included in the final project-planning documents: — Identification of all laboratory SOPs by number, date, and appropriate method citation, including any modifications or method optimization, procedures [Note: the project team should verify that the selected laboratory is capable of meeting the project-specific Measurement Performance Criteria, using the specified methods and SOPs], — Reference to the laboratory's quality manual, however named, — Names of laboratory personnel responsible for identifying non-conformance and reporting problems to the project team. (Include them in the project organization chart), — Names of laboratory personnel responsible for initiating and documenting any corrective action. (Include them in the project organization chart), and — Sample disposal procedures.
11	Section 4.11, page 4-13	Analytical QC criteria are incomplete.	The final project-planning documents should specify the types, frequency, and acceptance criteria for all method-specified QC samples, as well as corrective action and reporting requirements. This information may be contained in laboratory SOPs. If so, it should be summarized in the final Work Plan, and references to specific SOPs should be included. [See EPA QA/G-5, Section 2.2.5.]
12	Section 4.11, page 4-13	Laboratory instrument calibration requirements are incomplete.	Specific procedures for performing and documenting instrument calibration must be described in laboratory SOPs, which should be referenced in the final project-planning documents. The procedures must meet requirements contained in the analytical methods and the DoD QSM.
13	Section 4.11, page 4-13	Laboratory deliverables are not defined.	The final project-planning documents should specify the format and content of both hard-copy and electronic laboratory deliverables.
14	N/A	Information on planned data review procedures was not provided.	Final project-planning documents should discuss procedures for: — Data verification, — Data validation, and — Data quality assessment [see IRCDQM, Appendix H]